## REMARKS

Claims 1-8, 10, 11, 13-20, and 22-24 will be pending upon entry of the present amendment. Claims 8 and 10 are amended. No new matter has been added with the present amendment.

Applicant thanks the Examiner for indicating the allowability of claims 1, 2, 7, 19, 20, and 24, and of the subject matter of claims 5, 13, 14, and 22.

### Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 8 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which the applicant regards as his invention. In particular, the language "the first cylinder" at line 8 is pointed to as lacking antecedent basis. This language has been cancelled from claim 8, rendering the rejection moot.

### Summary of Rejections Under 35 U.S.C. §§ 102 and 103

Claim 8 is rejected under 35 U.S.C. §102(b) as being anticipated by Whalmark (U.S. Patent 3,233,555); claims 3, 4, 6, 15, and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Whalmark, in view of Forster (U.S. Patent 4,893,549); claim 23 is rejected under 35 U.S.C. §103(a) as being unpatentable over Whalmark; claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over Whalmark in view Schauer (U.S. Patent 3,382,813); claim 11 is rejected under 35 U.S.C. §103(a) as being unpatentable over Whalmark in view of Schauer and Forster.

In the discussion that follows, when a specific passage of a U.S. patent is cited, it will be referenced by column number and line number(s), separated by a colon, e.g., 4:22, indicating column 4, line 22.

### Response to Rejections Under 35 U.S.C. § 102

As currently presented, claim 8 recites, in part, "a back plate having a concave surface whose shape defines a section of a first cylinder lying on an axis, the concave surface following, as viewed in a first plane perpendicular to the axis, a first arc, and following, as viewed in a second plane transverse to the first plane and intersecting the concave surface, a first

straight line, the back plate being configured to slideably receive a valve plate thereon ...; and first and second reaction plates coupled to the back plate, each having a convex reaction surface whose shape and position defines a respective section of a second cylinder lying on the axis, the convex reaction surface of each of the first and second reaction plates following, as viewed in a respective plane lying parallel to the first plane and intersecting the concave surface, a second arc concentric to the first arc, and following, as viewed in the second plane, a second straight line, parallel to the first straight line, the reaction surfaces of the first and second reaction plates substantially facing, and spaced a selected distance from, the concave surface of the back plate."

Wahlmark fails to anticipate these limitations of claim 8. In particular, Wahlmark fails to anticipate "first and second reaction plates ..., the convex reaction surface of each of the first and second reaction plates ... following, as viewed in the second plane, a second straight line parallel to the first straight line ...."

Wahlmark's base surface 72 "is a segmental cylindrical surface ..., having its axis at 55 (*Wahlmark*, 5:23, 24), and can correspond to the back plate of claim 8. However, the sidewalls 70 cannot be considered to correspond to the first and second reaction plates of the claim, as argued in the Office Action. The Office Action points to the upper portions of channels 64 as corresponding to the reaction surfaces of the first and second reaction plates of claim 8. With reference to Wahlmark's Figure 3, which can be regarded as corresponding to a view in the second plane recited in claim 8, it can be seen that the upper portions of channels 64 do not each "follow ... a second straight line parallel to the first straight line," as recited in claim 8, but instead follow respective arcuate curves defining the curved channels 64 in which the ball bearings 63 travel. Wahlmark therefore fails to anticipate each limitation of claim 8, which is thus allowable under § 102.

Furthermore, the quoted limitation of claim 8 would not be obvious under § 103 in view of Wahlmark, for at least the following reasons. First, if Wahlmark's curved channels 64 were modified to conform to the language of claim 8, they would be unsatisfactory for their intended purpose (see MPEP § 2143.01, subsection V), because they would not provide a lateral surface against which the ball bearings 63 could bear in order to obviate lateral play and chatter (5:25-30), and to the extent the bearings did bear on the modified reaction surfaces, the bearings and the reaction surfaces would likely be damaged by the concentration of forces to a single

point on the surfaces of the ball bearings, which would result from the contact of the spherical ball bearings against the flat/convex shape of the reaction surfaces. Second, such a modification would change Wahlmark's the principle of operation (see MPEP § 2143.01, subsection VI), inasmuch as the ball bearings would no longer operate to eliminate lateral play and chatter. Finally, claim 8 would not be obvious under § 103 in view of Wahlmark because, with the exception of the present application, there is no known reference from which a teaching or suggestion to make the modification could be drawn.

Response to Rejections Under 35 U.S.C. § 103

Claim 3 recites, in part, "a plurality of hold-down pistons distributed along first and second edges of a same surface of the valve plate in respective hold-down cylinders formed in the valve plate, each of the hold-down pistons configured to be biased, by pressurized fluid in the respective hold-down cylinder, against a surface of one of the reaction plates." A combination of Wahlmark and Forster fails to teach or suggest this limitation of claim 3.

The Examiner acknowledges that Wahlmark fails to teach hold-down pistons in cylinders (*Office Action*, page 5), but argues that "[i]t would have been an obvious matter of design choice to make these ball bearings pistons, since such a modification would have involved a mere change in shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art," citing *In re Dailey* (357 F.2d 669, 149 U.S.P.Q. 47, (1966)) and MPEP § 2144.04 IV B. Applicant strongly disagrees. As the cited section of the MPEP explains, an Examiner may use the rationale used by the court in a prior legal decision "*if the facts in [the] decision are sufficiently similar* to those in an application under examination." (MPEP § 2144.04, emphasis added.) In the same paragraph, the MPEP cautions that, "[i]f the applicant has demonstrated the criticality of a specific limitation, it would not be appropriate to rely solely on case law as the rationale to support an obviousness rejection."

Looking first at the facts in *Dailey*, the relevant portion of the decision relates to the shape of an infant nursing bottle. The claims recited a "disposable, plastic infant nursing container ..., comprising: a top section of self-sustaining formed material having a nipple opening therein; a bottom section of ... flexible plastic material sealed to the [top] section and

collapsible thereinto, said bottom section being more flexible than the top section and having a shape such that in the collapsed condition is closely mated with the interior of the top section, ... the configuration of the top and bottom sections of the container [being] that of a portion of a sphere less than a hemisphere." (*Dailey*, at 670.) The drawings showed a container that had a somewhat flattened shape, with the bottom part being a substantial mirror of the top so that it could collapse therein when the contents were drawn out by the infant.

The prior art over which these claims were rejected included a reference that taught "a nursing-bottle made of two parts, one of which is flexible, the other rigid, and in which the flexible part operates to prevent a vacuum in the bottle as the milk is drawn out by the child and promotes evenness in the flow, [and showing in a figure] a view of said bottle when the two parts are connected and the bottle has been substantially emptied, the flexible part in this case being drawn into the rigid part." (*Id.*, at 671.) The drawings showed a slightly elongated oval shaped container, in which, again, the bottom part was a substantial mirror of the top part, and into which it was configured to collapse. The structure and function of the claimed container and the prior art container were substantially identical, and the difference in shape made no apparent difference to their respective operation. The court noted that "Appellants have presented no argument which convinces us that the particular configuration of their container is significant or is anything more than one of numerous configurations a person of ordinary skill in the art would find obvious for the purpose of providing mating surfaces in the collapsed container of [the prior art]." (*Id.*, at 672-73.)

As explained in the MPEP, and quoted above, a court's reasoning can be *per se* relied upon to reject a claim only if the prior case before the court and the case before the Examiner are sufficiently similar. Thus, in order to properly rely on Dailey alone to support an obviousness rejection on the basis that the admitted novel shape of a claimed element does not distinguish the claim over the prior art, the claim element in question would need to be substantially identical in structure and function to a corresponding element of the prior art, and the difference in shape would need to be irrelevant to the operation of the claimed device. This is not the case in the present application. It is well known in the art that pistons and ball bearings are not structurally or functionally identical or interchangeable.

A piston (e.g., piston 138 of Figure 10 of the application) transmits a linear force along its own axis, over a selected range of travel. The force applied is a function of fluid pressure in its cylinder and the cross sectional area of the cylinder (see application, page 9, line 22 to page 10, line 7), and changes in direct proportion to changes of fluid pressure. A piston typically has very low fluid loss.

In contrast, a ball bearing (e.g., ball bearing 63 of *Wahlmark*) is used to reduce friction between two surfaces as they move in a lateral plane with respect to each other, such that a distance between the two surfaces remains constant (*id.*, Figures 2 and 3, and 4:23-27). Clearance is provided within a socket for a lubricating film on the bearing (*id.*, 5:54-75), and there is a continuous loss of fluid as bearing rotation carries fluid out of the socket. Fluid loss increases as fluid pressure increases, so fluid pressure is typically no higher than that necessary to maintain the lubricating film (id., 6:1-19). Transmitted force of a ball bearing does not change appreciably with changes in fluid pressure, but remains equal to the contact forces between the two surfaces. If clearance between the two surfaces is greater than the diameter of the ball bearing and the thickness of the lubricating film, play between the two surfaces will result, which is generally undesirable, so care is taken to minimize such play (*id.*, 5:25-39).

Applicant notes that, with regard to the function of seating the port plate during initial start up, Wahlmark states that, "when hydraulic fluid under charging pressure *initially* enters the lubricant conduits 85 it urges the ball bearings outwardly in their sockets 67 and tends to force the bearing lands of the port plate 62 into seated relationship against the arcuate base surface 72 ...." (*Id.*, 7:25-29, emphasis added.) One of ordinary skill in the art will recognize that while Wahlmark's machine is not powered the lubricating film around the ball bearings will drain from the bearings and the socket, allowing the ball bearings to settle in their sockets and resulting in a small amount of play, which in turn will permit the port plate to separate slightly from the base surface. During start up, as pressurized fluid enters the sockets 67, it will push the ball bearings outward a distance sufficient to allow the fluid to flow around the bearings and reform the lubricating film. This will eliminate the play and push the port plate back toward its seated relationship on the base surface. Once sufficient clearance has been made for the fluid to flow in the sockets, the ball bearings will not continue to apply significant outward pressure. Otehrwise, it would not be necessary to provide shims to eliminate play, as discussed at 5:25-39.

As demonstrated, above, the facts of *Dailey* are not sufficiently similar to those of the present application, and the limitation in question is critical to the scope of the claim. It is therefore "not [] appropriate to rely solely on case law as the rationale to support an obviousness rejection."

The Examiner points to Forster's boreholes 17 as corresponding to the hold-down cylinders of claim 3, "distributed along first and second edges of a same surface of the valve plate," and acknowledges that Wahlmark does not teach this limitation. However, the Examiner fails to provide any rationale as to why one of ordinary skill would be motivated to combine this feature of Forster with Wahlmark's machine. In supporting the obviousness of a combination of the references, the Examiner argues that "it would have been obvious ... to have modified the pump of Wahlmark by implementing a pressurized fluid distribution system which feeds fluid from two different fluid feed channels to the pistons in order to keep the valve plate slidingly balanced as well as allow for the option to pressurize the pistons on either side of the valve plates different amounts."

Applicant notes that these arguments appear to be directed to the limitations of claims 4, 6, and 17, which depend from claim 3, but are silent with regard to why one would be motivated to distribute hold-down cylinders and pistons "along first and second edges of a same surface of the valve plate." Distribution of pressurized fluid to the cylinders does not require a particular arrangement of the cylinders. Even if the proposed reasoning were appropriate to support a rejection of claims 4, 6, and 17, it would be inadequate to support a rejection of claim 3, which neither recites nor incorporates the limitations of its dependent claims. Otherwise, given such a rejection, it would be possible to place claim 3 in condition for allowance merely by cancelling its dependent claims, thereby removing the justification for the combination of references. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." (MPEP § 706.02(j).) The Examiner has not pointed to any suggestion in either Wahlmark or Forster, nor provided any line of reasoning, supporting the obviousness of combining the references to teach the subject matter of the invention of claim 3.

Furthermore, it can be shown that a combination of Forster with Wahlmark is not appropriate to support such a rejection. First, modifying the sockets of Wahlmark's machine as taught by Forster would make it impossible for Wahlmark's ball bearings to function as intended, but would render Wahlmark unsuitable for its intended purpose. Wahlmark teaches that its piston port plate 62 is mounted on ball bearings 67 that are disposed facing the sidewalls 70 (*Wahlmark*, 5:5-7, 12-18), to reduce friction as the port plate travels over the base surface 72 (*id.*, 5:3-7 and 17-22), to control lateral play and chatter (*id.*, 5:25-32), and to counteract torque (*id.*, 5:66-6:19). Inasmuch as, according to the proposed modification, they would be positioned in cylinders that face directly up (as viewed in Wahlmark's Figure 3), the ball bearings (or pistons) would not be capable of reducing friction, eliminating lateral play and chatter, or counteracting torque, and would therefore be rendered unsatisfactory for their intended purpose. (see MPEP § 2143.01 V. ("The proposed modification cannot render the prior art unsatisfactory for its intended purpose")).

Second, The function for which Forster's support pistons 15 are provided is not required by Wahlmark. Forster teaches a machine that utilizes support pistons 15 and piston rods 16 "to press the swivel carriage 6 against the swivel carriage guide surface 8 of swivel carriage housing 9 by a force which acts against the hydrostatic release forces" (*Forster*, 55-58). For its part, Wahlmark specifically teaches away from a machine configuration that generates sufficient force to cause separation (i.e., release forces) in the analogous components. For example, Wahlmark states, at 7:7-16, that,

> [t]o prevent separation of the plate 62 from the base surface 72 of the channel 64, the total bearing surface area of the outer bearing face 71 on the port plate 62 is reduced to that of the bearing lands 113, as seen in Figure 4. This area is calculated so that the fluid pressure forces tending to separate the port plate 62 from the base surface 72 of the channel 64 are reduced to slightly less than the force exerted on the port plate by the cylinder barrel 100.

(See, also, 6:51-74 and 10:22-38 and 50-62.)

Wahlmark clearly has no need for the support pistons taught by Forster, because it doesn't permit positive lifting forces in its machines. Apart from eliminating most of the function and benefit provided by Wahlmark's ball bearings, the proposed combination has no effect on Wahlmark's operation, and resolves no problem that is not already addressed by

Wahlmark's unmodified embodiment. Accordingly, there is no motivation to combine the references.

Finally, even if one were somehow motivated to combine elements of Forster with Wahlmark, the resulting structure would not correspond to the device of claim 3, absent the present application and claims as a template, which is impermissible. A more reasonable combination would be Wahlmark's embodiment of Figures 6 and 7 with Forster. Referring to Wahlmark's Figure 7, a pair of arm assemblies 415 is provided to "urge the port plate 362 against the port cap 326 without the benefit of cylinder pressure ... with sufficient pressure to assure satisfactory seating of the components for initiation of pump operation." (*Wahlmark*, 11:1, 2, 14, and 15.) Comparing Wahlmark's Figure 7 with Forster's Figure 2, it can be seen that there are a number of similarities between Wahlmark's arm assemblies 415 and Forster's piston rods 16. The balls 416a and sockets 418 at the upper ends (as viewed in Figure 7) of Wahlmark's arm assemblies are aligned for rotation with the machine's axis 355 (see *id.*, 11:15-19). Likewise, the corresponding balls and sockets of Forster's piston rods 16 are aligned for rotation with its machine's axis S (see Forster's Figure 1). Additionally, the sockets 418 in which the bottom ends 416b of Wahlmark's arm assemblies are seated are in the top face (as viewed in Figure 7) of its port plate 362, in the same relative position in which Forster's boreholes 17 and support pistons 15 are shown. Clearly, if one of ordinary skill in the art were motivated to combine Forster with Wahlmark, it would be far more reasonable to modify Wahlmark's arm assemblies 415 than to make the complex modifications to Wahlmark's ball bearings 63, sockets 67, port plate 62, and side walls 70, as would be required for the modification proposed by the Examiner. The alternate combination requires far fewer structural changes to Wahlmark and adds the functionality of Forster's piston rods while preserving the function and benefit of Wahlmark's original arm assemblies, in contrast to the combination proposed by the Examiner, which eliminates most of the benefits provided by the ball bearings.

For all of the reasons outlined above, claim 3 is allowable over the art of record, individually or in any motivated combination.

Claim 18, which depends from claim 3, recites that "at least one of the plurality of hold-down pistons has a diameter that is smaller than another of the hold-down pistons." The Examiner argues that "it "would have been an obvious matter of design choice to make the hold down pistons different diameters in order to have them distribute more or less pressure to the

system." Applicant strongly disagrees. Wahlmark specifically teaches that when increased pressure is required at the (two) lead ball bearings 63a because of torque during increases of pump displacement, it must also be supplied at the (remaining two) lagging ball bearings 63b because they will experience the same torque load during decreases in displacement (6:1-19). Thus, all of the ball bearings must be pressurized equally. Pistons of different diameters would make this impossible. The Examiner cites *In re Rose* (220 F.2d 459, 105 USPQ 237 (1955)) to support the rejection, stating that "a change in size is generally recognized as being within the level of ordinary skill in the art." However, *Rose* is inapposite to the present case, and the conclusion drawn is inadequate to support a *prima facie* case of obviousness.

In *Rose*, the claims were directed to a bundle of lumber, and the limitation in question recited that the bundle "is of appreciable size and weight requiring handling by a lift truck." (*Rose*, at 461.) The appellant's argument was that the prior art taught only lumber packages that could be lifted by hand, so a larger bundle was unobvious. In other words, the question before the court was whether a device was patentable merely because an element of the device had a different size than a corresponding component of an otherwise identical prior art device. In the present case, the claim recites hold-down pistons of two different sizes. The question before the Examiner in the present case has nothing to do with the size of prior art pistons; in fact, as the Office Action acknowledges, at page 5, second paragraph, the prior art does not even disclose hold-down pistons, of any size. The question is whether the prior art teaches hold-down pistons of two different sizes in the same device. This is not the fact pattern found in *Rose*, which is therefore not "sufficiently similar" to the present case to stand alone in support of an obviousness rejection.

Because neither Wahlmark nor Forster teach or suggest the above-quoted limitation, claim 18 is allowable.

Claim 6 recites that "each of the plurality of hold-down pistons comprises an aperture passing along a central axis from a first surface to a second surface thereof," and claim 17 recites that "each of the plurality of hold-down pistons comprises a fluid passage extending along a central axis thereof from a cylinder end to the face of the respective piston." The Examiner points to Forster's hollow piston rods 16 of Figure 4 as being analogous to the aperture of claim 6 and fluid passage of claim 17. Applicant respectfully disagrees. Forster's hollow

piston rods transmit fluid feed and fluid discharge to and from the swivel carriage 6 and housing 9 (*Forster*, 5:9-20). This is the fluid that drives the machine and that, as is well known in the art, requires a substantially open and unobstructed passage for efficient operation of the machine. According to the Examiner's proposed modification, Wahlmark's ball bearings and sockets are replaced by Forster's piston rods 16 and boreholes 17, with the piston rods being biased against modified versions of Wahlmark's sidewalls 70, as analogues of the reaction plates of claim 3. Thus, during operation, the piston rods slide along the sidewalls as the port plate moves. The Examiner has not argued that, in Wahlmark's modified machine, the piston rods would somehow transmit feed and discharge fluid from the sidewalls to the port plate, nor would the prior art enable such a construction. Thus, if the hollow passages are preserved in the modified version, their function has necessarily changed. "[In reviewing a claim under § 103,] a court [or an Examiner] must ask whether the improvement is more than the predictable use of prior art elements *according to their established functions*." (*KSR International v. Teleflex Inc.*, 127 S.Ct. 1727, 1740, 82 U.S.P.Q.2d 1385 (2007), emphasis added). There is no obvious reason why, in combining Forster with Wahlmark, one of ordinary skill would provide hollow piston rods when the purpose for which Forster provided them is nonexistent in the combination. Accordingly, claims 6 and 17 are allowable over the art of record.

As currently presented, claim 10 recites, in part, "changing the displacement of the machine by sliding the valve plate in an arc along a surface of the back plate; and biasing a plurality of hold-down pistons along respective axes lying normal to the surface, against a reaction plate coupled to the back plate." A combination of Wahlmark and Schauer fails teach or suggest biasing a hold-down piston along an axis lying normal to the surface. In rejecting claim 10, the Examiner points to the position of Wahlmark's ball bearings relative to the arc, as viewed in Figure 2. However, claim 10 has been amended to clarify that the recited bias vector is with respect to the *surface* on which the valve plate slides, rather than the *arc*, and so must be considered in three dimensions. Thus, even assuming, *arguendo*, that Wahlmark's ball bearings can be considered analogous to the pistons of claim 10, Wahlmark's 115 line must also be normal to the surface as viewed in Figure 3, which it is not.

The primary purpose served by Wahlmark's ball bearings 63 is to reduce friction and lateral play (see 5:3-39), which requires that they be configured to support and resist lateral

forces, i.e., forces acting from the sides, as viewed in Figure 3. Wahlmark recognizes that when a machine is first turned on, there can be fluid losses until the clamping forces generated in the machine cause the port plate to properly seat. Accordingly, the vector 115 of the sockets 67 is canted upward from horizontal to apply some downward force to seat the port plate when the machine is first turned on and fluid initially flows into the sockets (see 7:17-30 and 10:73-11:2). Figure 3 clearly shows that the socket axes 115, along which the ball bearings 63 are biased when fluid first enters the sockets 67, are not normal to the surface on which the port place slides, nor can they be made to be normal without rendering them unsuitable for their intended purpose. Schauer does not teach hold-down pistons, or even ball bearings, and cannot therefore remedy Wahlmark's deficiency. Accordingly, claim 10 is allowable over a combination of Schauer and Wahlmark.

Claim 23 recites, in part, "a plurality of hold-down pistons positioned in respective ones of the hold-down cylinders, each of the hold-down pistons configured to be biased, by pressurized fluid in the respective hold-down cylinder, against a surface of one of the reaction plates, the valve plate and cylinder barrel configured such that a net lifting force of the valve plate and cylinder barrel, exclusive of forces generated in the hold-down cylinders, is positive." Wahlmark fails to teach or suggest "[a machine] configured such that a net lifting force ... is positive," as recited in claim 23. In rejecting claim 23, the Examiner argues, with regard to functional claim language (e.g., *configured to*), that "apparatus claims cover what a device is, not what it does[, and t]hus, if a prior art structure is capable of performing the intended use as recited in the preamble, or elsewhere in a claim, then it meets the claim." Applicant agrees with the Examiner in this regard. However, Applicant disagrees that Wahlmark is capable of meeting the claim language, as explained below.

The specification has been amended to clarify the meaning of the term *net lifting force*, which refers to the sum of upward and downward forces acting on the valve plate. Upward forces are often referred to as *separation forces*, i.e., forces that tend to separate the valve plate or cylinder barrel, while downward forces are often referred to as *clamping forces*, i.e., forces that act to clamp the components together. An extensive discussion of the forces acting on the valve plate and cylinder barrel that contribute to the net lifting force of a hydraulic machine can be found in the specification at page 3, line 6 through page 5, line 24. As will be

clear on the basis of that discussion, polarity of the net lifting force of a machine is independent of displacement, fluid polarity, or variations in fluid pressure, but depends entirely on the physical characteristics of that machine. If the net lifting force of a machine is positive, it cannot be made non-positive except by making structural changes to the machine, and vice-versa. Thus, if a machine is *configured* to have, e.g., a positive net lifting force, this functional language imposes a structural limitation on the machine, and a machine that has a negative net lifting force is not capable of meeting this limitation without undergoing specific structural changes. Typically, a negative net lifting force is required for proper operation of a machine, to prevent lifting of the valve plate. This is true with Wahlmark as well as with the disclosed embodiments of the present application. However, as discussed in the specification, beginning at page 9, line 22, the total area of the hold-down cylinders is selected to offset an otherwise positive net lifting force, resulting in a negative net lifting force. In discussing these forces, Wahlmark states that,

> [t]o prevent separation of the plate 62 from the base surface 72 of the channel 64, the total bearing surface area of the outer bearing face 71 on the port plate 62 is reduced to that of the bearing lands 113, as seen in Figure 4. This area is calculated so that the *fluid pressure forces tending to separate the port plate 62 from the base surface 72 of the channel 64 are reduced to slightly less than the force exerted on the port plate by the cylinder barrel 100.*
>
> (Wahlmark, 7:7, *et seq.*, emphasis added.)

It can be seen, then, that to make Wahlmark's net lifting force positive, it would be necessary to increase the total bearing surface area of the outer bearing face 71 until the separation force exceeds the downward force of the cylinder barrel. This would require a specific structural change to the machine. Claim 23 recites that, "[exclusive of forces generated in the hold-down cylinders,] the valve plate and cylinder barrel [are] configured such that a net lifting force of the valve plate and cylinder barrel ... is positive." Wahlmark cannot teach or suggest this limitation, inasmuch as it explicitly teaches the opposite. Nor are any of Wahlmark's machines "capable of performing the intended use" recited in the claim, i.e., to have a positive net lifting force, without undergoing structural changes that would be contrary to Wahlmark's explicit teaching. Accordingly, claim 23 is allowable over Wahlmark.

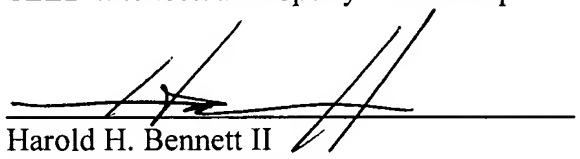
Conclusion

In light of the above amendments and remarks, Applicant respectfully submits that all pending claims are allowable, and therefore respectfully requests that the Examiner reconsider this application and timely allow all pending claims. Examiner Bertheaud is encouraged to contact Mr. Bennett by telephone at (206) 694-4848 to discuss the above and any other distinctions between the claims and the applied references. If the Examiner notes any informalities in the claims, he is encouraged to contact Mr. Bennett by telephone to expeditiously correct such informalities.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC



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